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HDP/SB/21 based on PTO/SB/21 (08-00)

APX #
JF

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

| | |
|------------------------|------------------|
| Application Number | 10/511,582 |
| Filing Date | October 18, 2004 |
| Inventor(s) | Epke MOSMA |
| Group Art Unit | 3643 |
| Examiner Name | Son T. Nguyen |
| Attorney Docket Number | 19200-000041/US |

ENCLOSURES (check all that apply)

| | | |
|--|--|---|
| <input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Letter to the Official Draftsperson and _____ Sheets of Formal Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ | <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> LETTER SUBMITTING APPEAL BRIEF AND APPEAL BRIEF (w/clean version of pending claims) <input checked="" type="checkbox"/> Appeal Communication to Group (Notice of Appeal, <u>Brief</u> , Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below): |
|--|--|---|

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

| | | | | | |
|-------------------------|----------------------------------|---------------|--------------------|----------|--------|
| Firm or Individual name | Harness, Dickey & Pierce, P.L.C. | Attorney Name | John A. Castellano | Reg. No. | 35,094 |
| Signature | | | | | |
| Date | June 22, 2007 | | | | |

FEE TRANSMITTAL for FY 2007

Effective 2/8/2006. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 500.00

Complete if Known

Application Number 10/511,582
Filing Date October 18, 2004
First Named Inventor Epke BOSMA
Examiner Name Son T. Nguyen
Art Unit 3643
Attorney Docket No. 19200-000041/US

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account:

Deposit Account Number 08-0750

Deposit Account Name Harness, Dickey & Pierce, PLC

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments
☒ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|--------------|----------|--------------|----------|------------------------|----------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1011 | 300 | 2011 | 150 | Utility filing fee | |
| 1012 | 200 | 2012 | 100 | Design filing fee | |
| 1013 | 200 | 2013 | 100 | Plant filing fee | |
| 1014 | 300 | 2014 | 150 | Reissue filing fee | |
| 1005 | 200 | 2005 | 100 | Provisional filing fee | |

SUBTOTAL (1) (\$) 0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| Total Claims | Extra Claims | Fee from below | Fee Paid |
|--------------------|--------------|----------------|----------|
| 13 | 0 | 0 | 0 |
| Independent Claims | 2 | 0 | 0 |
| Multiple Dependent | | | 0 |

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1202 | 50 | 2202 | 25 | Claims in excess of 20 | |
| 1201 | 200 | 2201 | 100 | Independent claims in excess of 3 | |
| 1203 | 360 | 2203 | 180 | Multiple dependent claim, if not paid | |
| 1204 | 200 | 2204 | 100 | ** Reissue independent claims over original patent | |
| 1205 | 50 | 2205 | 25 | ** Reissue claims in excess of 20 and over original patent | |

SUBTOTAL (2) (\$) 0

**or number previously paid, if greater; For Reissue, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1051 | 130 | 2051 | 65 | Surcharge - late filing fee or oath | |
| 1052 | 50 | 2052 | 25 | Surcharge - late provisional filing fee or cover sheet. | |
| 1053 | 130 | 1053 | 130 | Non-English specification | |
| 1812 | 2,520 | 1812 | 2,520 | For filing a request for reexamination | |
| 1804 | 920* | 1804 | 920* | Requesting publication of SIR prior to Examiner action | |
| 1805 | 1,840* | 1805 | 1,840* | Requesting publication of SIR after Examiner action | |
| 1251 | 120 | 2251 | 60 | Extension for reply within first month | |
| 1252 | 450 | 2252 | 225 | Extension for reply within second month | |
| 1253 | 1020 | 2253 | 510 | Extension for reply within third month | |
| 1254 | 1,590 | 2254 | 795 | Extension for reply within fourth month | |
| 1255 | 2,160 | 2255 | 1080 | Extension for reply within fifth month | |
| 1401 | 500 | 2401 | 250 | Notice of Appeal | 500 |
| 1402 | 500 | 2402 | 250 | Filing a brief in support of an appeal | |
| 1403 | 1000 | 2403 | 500 | Request for oral hearing | |
| 1452 | 500 | 2452 | 250 | Petition to revive - unavoidable | |
| 1453 | 1500 | 2453 | 750 | Petition to revive - unintentional | |
| 1462 | 400 | 1462 | 400 | Petition fee under 37 CFR 1.17(f) | |
| 1463 | 200 | 1463 | 200 | Petition fee under 37 CFR 1.17(g) | |
| 1464 | 130 | 1464 | 130 | Petition fee under 37 CFR 1.17(h) | |
| 1807 | 50 | 1807 | 50 | Processing fee under 37 CFR 1.17 (q) | |
| 1806 | 180 | 1806 | 180 | Submission of Information Disclosure Stmt | |
| 8021 | 40 | 8021 | 40 | Recording each patent assignment per property (times number of properties) | |
| 1809 | 790 | 2809 | 395 | Filing a submission after final rejection (37 CFR § 1.129(a)) | |
| 1810 | 790 | 2810 | 395 | For each additional invention to be examined (37 CFR § 1.129(b)) | |
| 1801 | 790 | 2801 | 395 | Request for Continued Examination (RCE) | |

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 500

4. SEARCH/EXAMINATION FEES

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|--------------|----------|--------------|----------|-------------------------|----------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1111 | 500 | 2111 | 250 | Utility Search Fee | |
| 1112 | 100 | 2112 | 50 | Design Search Fee | |
| 1113 | 300 | 2113 | 150 | Plant Search Fee | |
| 1114 | 500 | 2114 | 250 | Reissue Search Fee | |
| 1311 | 200 | 2311 | 100 | Utility Examination Fee | |
| 1312 | 130 | 2312 | 65 | Design Examination Fee | |
| 1313 | 160 | 2313 | 80 | Plant Examination Fee | |
| 1314 | 600 | 2314 | 300 | Reissue Examination Fee | |

SUBTOTAL (4) (\$) 0

SUBMITTED BY

Name (Print/Type) John A. Castellano Registration No. 35,094 Telephone (703) 668-8000
Signature Date June 22, 2007

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PATENT APPLICATION

IN THE U.S. PATENT AND TRADEMARK OFFICE

Appellant: Epke BOSMA Art Unit: 3643
Application No.: 10/511,582 Examiner: Son T. Nguyen
Filed: October 18, 2004 Conf. #: 4500
For: AUTOMATIC MILK SEPARATION
Attorney Docket No.: 19200-000041/US

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314
Mail Stop Appeal Brief - Patents

June 22, 2007

APPELLANT'S BRIEF ON APPEAL UNDER 37 C.F.R. §41.37

Sir:

In accordance with the provisions of 37 CFR §41.37, Appellant submits the following:

I. REAL PARTY IN INTEREST:

The real party in interest in this appeal is Delaval Holding AB. Assignment of the application was submitted to the U.S. Patent and Trademark Office on October 18, 2004, and recorded on the same date at Reel 016336, Frame 0840.

II. RELATED APPEALS AND INTERFERENCES:

There are no known appeals or interferences that will affect, be directly affected by, or have a bearing on the Board's decision in this Appeal.

06/25/2007 CNGUYEN2 00000036 10511582

01 FC:1401 500.00 OP
Adjustment date: 06/26/2007 MAHMED1
06/25/2007 CNGUYEN2 00000036 10511582
01 FC:1401 500.00 OP

06/26/2007 MAHMED1 00000012 10511582
01 FC:1402

500.00 OP

III. STATUS OF CLAIMS:

Claims 1-13 are pending in the application, with claim 1 being written in independent form. Claim 4 is cancelled by an amendment filed prior to filing this brief and subsequent to filing the notice of appeal in this case. Claims 8-13 are withdrawn.

Claims 1-3 and 5-7, which are set forth in the attached Claims Appendix, are on appeal.

IV. STATUS OF AMENDMENTS:

An amendment filed prior to filing this appeal brief and subsequent to filing the notice of appeal requests cancellation of claim 4 under 37 C.F.R. § 41.33(a). Applicant respectfully requests entry of this amendment.

V. SUMMARY OF CLAIMED SUBJECT MATTER:

Independent claim 1 is written in method format. The claims are directed to automatic, multiple testing of collected milk for mastitis and separating the milk based on these tests.¹

A. Claim 1:

With reference to the example, non-limiting embodiment depicted in Fig. 3, animals are automatically milked and samples of milk are gathered for testing in the third step of FIG. 3.² A first measurement for mastitis, for example, a conductivity measurement, is performed on the milk sample in the first decision step of FIG. 3.³ Based on the qualities of this first measurement, a second measurement of the same sample may be conducted in the second decision step of FIG. 3.⁴ Based on these two measurements of mastitis, a computer

¹ Spec as filed and published in U.S. Patent Application Publication 2005/0126498 A1 (hereinafter "Spec"), page 1, ¶¶ [0009]-[0012].

² Spec, pages 2-3, ¶ [0029].

³ Id.

⁴ Id.

determines where the milk is directed in the final steps of FIG. 3; for example, milk may be directed to a holding tank or disposed of.⁵

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL:

Appellants seek the Board's review of the rejection of claims 1-3 and 5-7 under 35 USC § 103(a) as being obvious over SE 2000-00179 A to Birk ("Birk"), in view of US Pat. 6,031,367 to Mangan ("Mangan").

VII. ARGUMENTS:

A. The Obviousness Rejection to Claim 1:

The Examiner has failed to set forth a *prima facie* case of obviousness; particularly, the Examiner has failed to apply references that teach each and every element of claim 1.

The Examiner alleges that Birk discloses performing a second indicator of mastitis in response to a first indicator of mastitis as recited in claim 1. Birk, however, teaches only a single milk quality test and teaches away from multiple mastitis indicators by stating:

"Each milk conduit preferably comprising [sic – comprises] a flow sensor for measuring the quantity and or the quality of milk from the teat. Alternatively said receivers may comprising [sic – comprise] measuring elements 25 for measuring the quantity and the quality of the milk in said receiver."⁶

The "alternately" indicates that either measuring elements 25 or a flow sensor measure quality, not both. Thus Birk not only fails to disclose multiple quality testings, but indicates only one quality measurement is to be taken, thus teaching away from the first and second measurements of claim 1.

⁵ Spec, page 3, ¶ [0030].

⁶ Birk p. 4, ll. 2-6 (Emphasis added).

The passages of Birk relied on by the Examiner offer further examples of how Birk fails to disclose or suggest the first and second measurements of claim 1 by describing a measurement regime using element 25 as the single quality measuring device:

“The measuring element 25 in each intermediate receiver, a separate quality measuring device arranged anywhere between the teat cups and the respective intermediate receiver or the flow sensors 45, 46, 47, 48 measures said quality of the milk and, as mentioned above, independence [sic – in dependence] of the quality of the milk it will be transferred to different storage containers A, B, C.”⁷

That is, only element 25 measures quality, and it may be placed somewhere between the teat cups and sensors 45, 46, 47, and 48, which measure only flow in the embodiment being described, not quality. The passage further indicates that milk is transferred based on the measurement of element 25 alone, as there is no teaching as to how any other measurement plays into the calculus of determining where milk is directed.

Even if Birk, another reference, or common sense taught or suggested two measurements of mastitis (which Applicant submits they do not), the applied references are still completely silent as to second measurements being “in response to said first indicator of mastitis indicating mastitis” as recited in claim 1. That is, because Birk contemplates only a single testing, there is no discussion of further testings based on the first testing, let alone any teaching how further testings may be so based on prior tests.

Birk further fails to teach or suggest dispensing milk based on the later measurements as recited in claim 1. Rather, as suggested by the passage quoted above from Birk page 5, milk is directed based on the single measurement. Again, because Birk requires a single measurement, milk can be diverted to holding tanks based solely on that single measurement. Thus, Birk fails to meet any claim element beyond a single mastitis measurement.

⁷ Birk p. 5, ll. 15-21.

Mangan fails to cure the above-specified deficiencies of Birk, and the Examiner does not rely on Mangan to do so. Specifically, Mangan is silent with regard to multiple, dependent mastitis measurements and how milk is diverted based on these plural measurements. Because Birk, alone or in combination with Mangan, fails to teach or fairly suggest each and every element of claim 1, Birk cannot anticipate or render obvious claim 1.

ii. Conclusion:

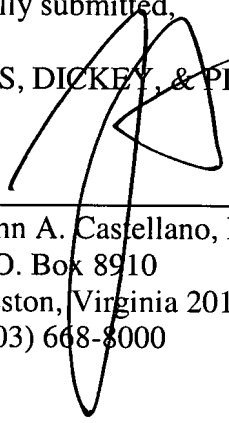
As demonstrated above, the Examiner's obviousness rejection should be reversed because the applied references, alone or in combination, do not fairly teach or suggest each and every element of claim 1 but instead teach away from the elements of claim 1. The Examiner's rejection of the dependent claims should be reversed for similar reasons.

The Commissioner is authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKY, & PIERCE, P.L.C.

By:



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JAC/REA
RA

CLAIMS APPENDIX

Claims 1-3 and 5-7 on Appeal:

1. A method for separating a first quantity of milk drawn from a milking animal in an automatic milking machine and a second quantity of milk drawn from the milking animal in said milking machine, comprising:

- milking an animal using said automatic milking machine,
- measuring a first indicator of mastitis during said milking, and in response to said first indicator of mastitis indicating mastitis, a second indicator of mastitis is performed, said second indicator of mastitis includes:

- analyzing at least a part of said first quantity of milk using an on-line cell counter for counting the number of cells in said first quantity of milk, and

- operating a valve in dependence on the counted number of cells so that if the counted number of cells is below a first threshold, said first quantity of milk is collected in a first container, and if said counted number of cells is equal to or above said first threshold, said first quantity of milk is directed to a drain or a second container.

2. The method according to claim 1, wherein the step of operating a valve further comprises the step of

- collecting said first quantity of milk in a third container if the counted number of cells are above a third threshold but below said first threshold and collect said first quantity of milk in said first container if said counted number of cells are below said third threshold, thereby collecting milk of a first superior quality in said first container, milk of a second quality in said third container and milk of a third quality is directed to said drain or collected in said second container.

3. The method according to claim 1, wherein said first indicator of mastitis is one indicator, or a selection of multiple indicators, selected from a group of indicators comprising: the conductivity of said first quantity of milk, the NAgase value of said first quantity of milk, the Urea value of said first quantity of milk, the temperature of said first quantity of milk, the milk flow from said milking animal or the milk quantity from a teat of said milking animal.

5. The method according to claim 1, wherein said first quantity of milk drawn from one milking animal is collected in an end unit for the duration of performing the somatic cell count.

6. The method according to claim 1, wherein said first quantity of milk is collected from a first teat of a milking animal and said second quantity of milk is collected from a second teat of said milking animal.

7. The method according to claim 1, wherein said first quantity of milk is collected from a first milking animal and said second quantity of milk is collected from a second milking animal.

APPELLANT'S BRIEF ON APPEAL UNDER 37 C.F.R. §41.37
U.S. Application No. 10/511,582
Atty. Docket 19200-000041/US

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.